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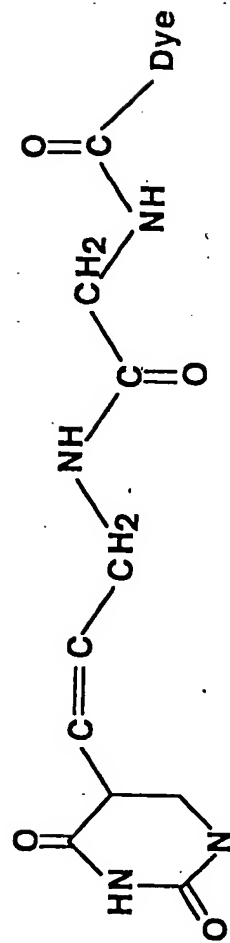
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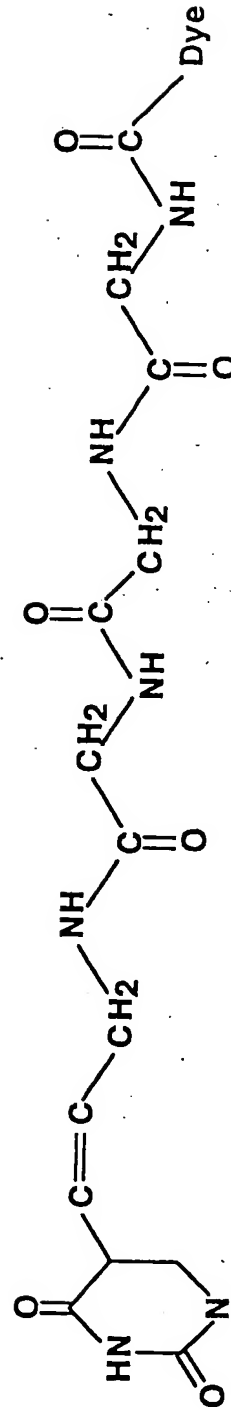


Figure 1

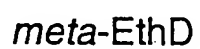
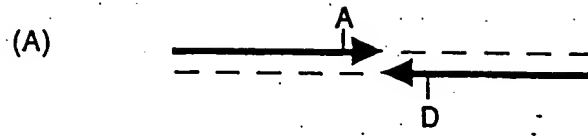


Figure 2



A = Energy Acceptor

D = Energy Donor

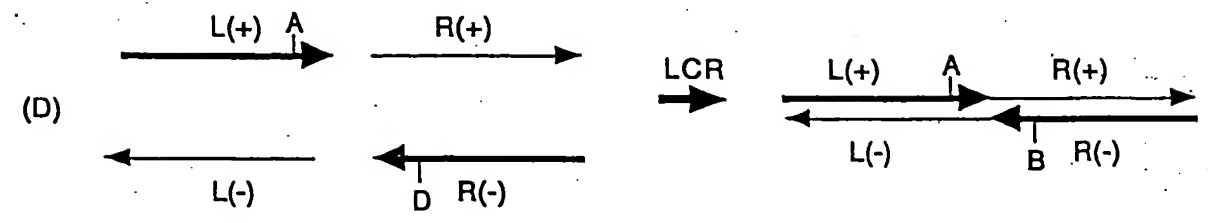
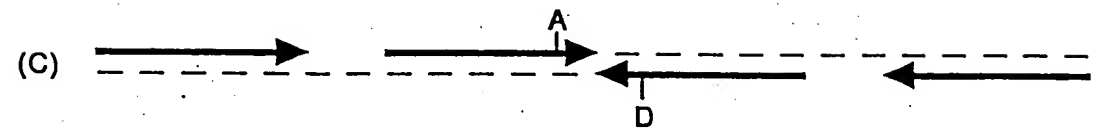
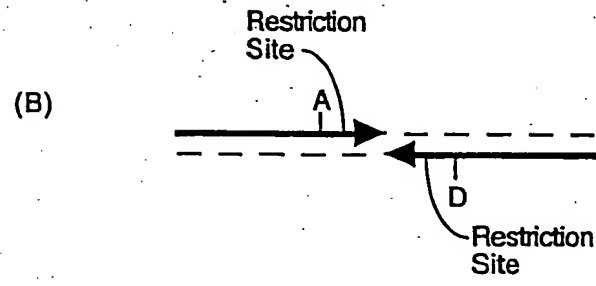


Figure 3

Target Sequence

——GCGACCTGCGAATGCTATGGATCAGGCTAGCCA——
——CGCTGGACGCTTACGATACCTAGTCCGATCGGT——

(A)

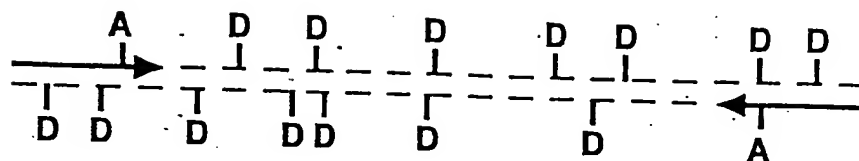
Donor
→
GCGACCTGCGAATGCTATggatcaggctagcca
cgctggacgcttacgataCCTAGTCCGATCGGT
←
Acceptor

(B)

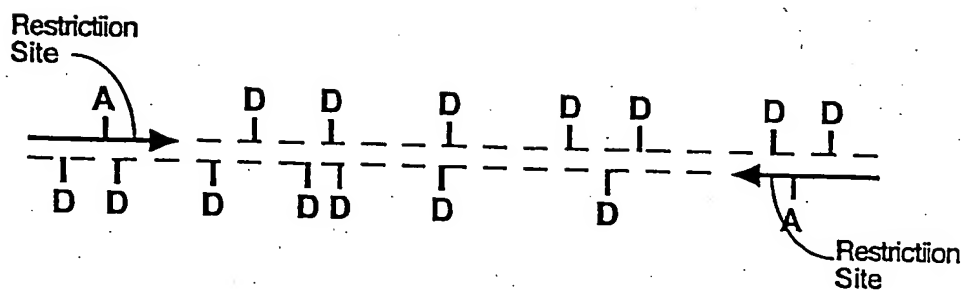
Donor
→
GCGACCTGCGAATGCTATggatcaggctagcca
cgctggacgcttacgatacctAGTCCGATCGGT
←
Acceptor

Figure 4

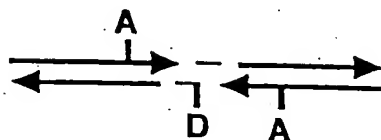
(A) PCR



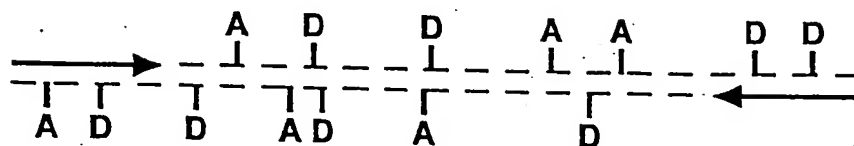
(B) SDA



(C) GAP-LCR



(D) PCR

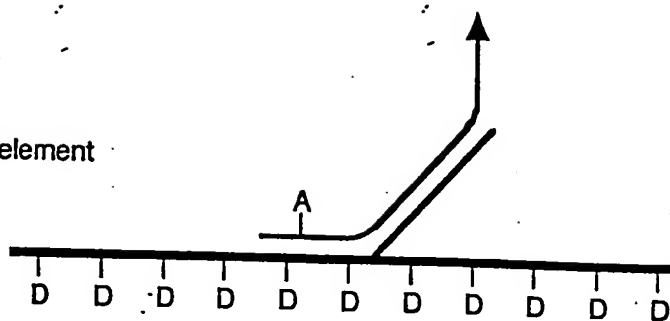


A = Energy Acceptor

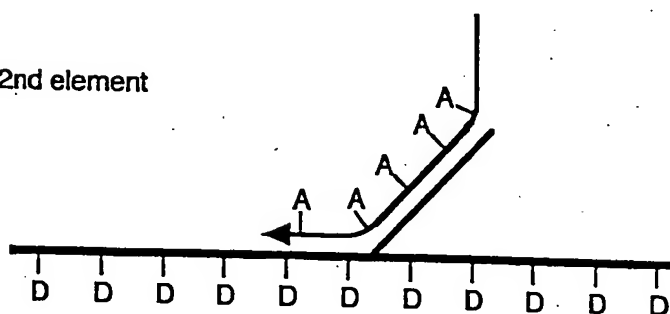
D = Energy Donor

Figure 5

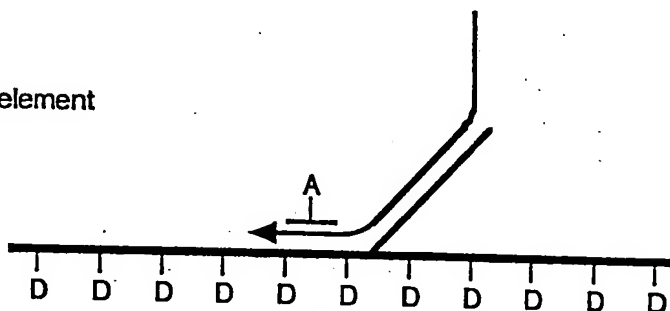
(A) Primer with 2nd element



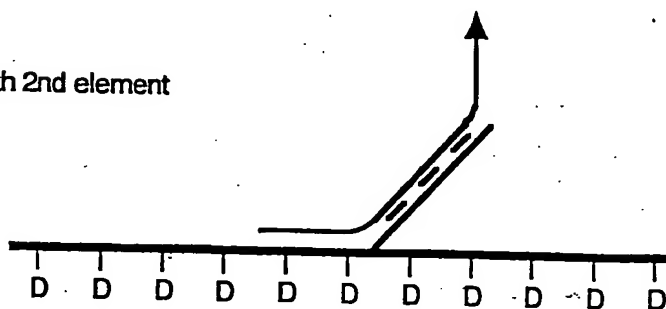
(B) Nucleotide with 2nd element



(B) Probe with 2nd element



(B) Intercalators with 2nd element



D = Energy Donor
A = Energy Acceptor

Figure 6

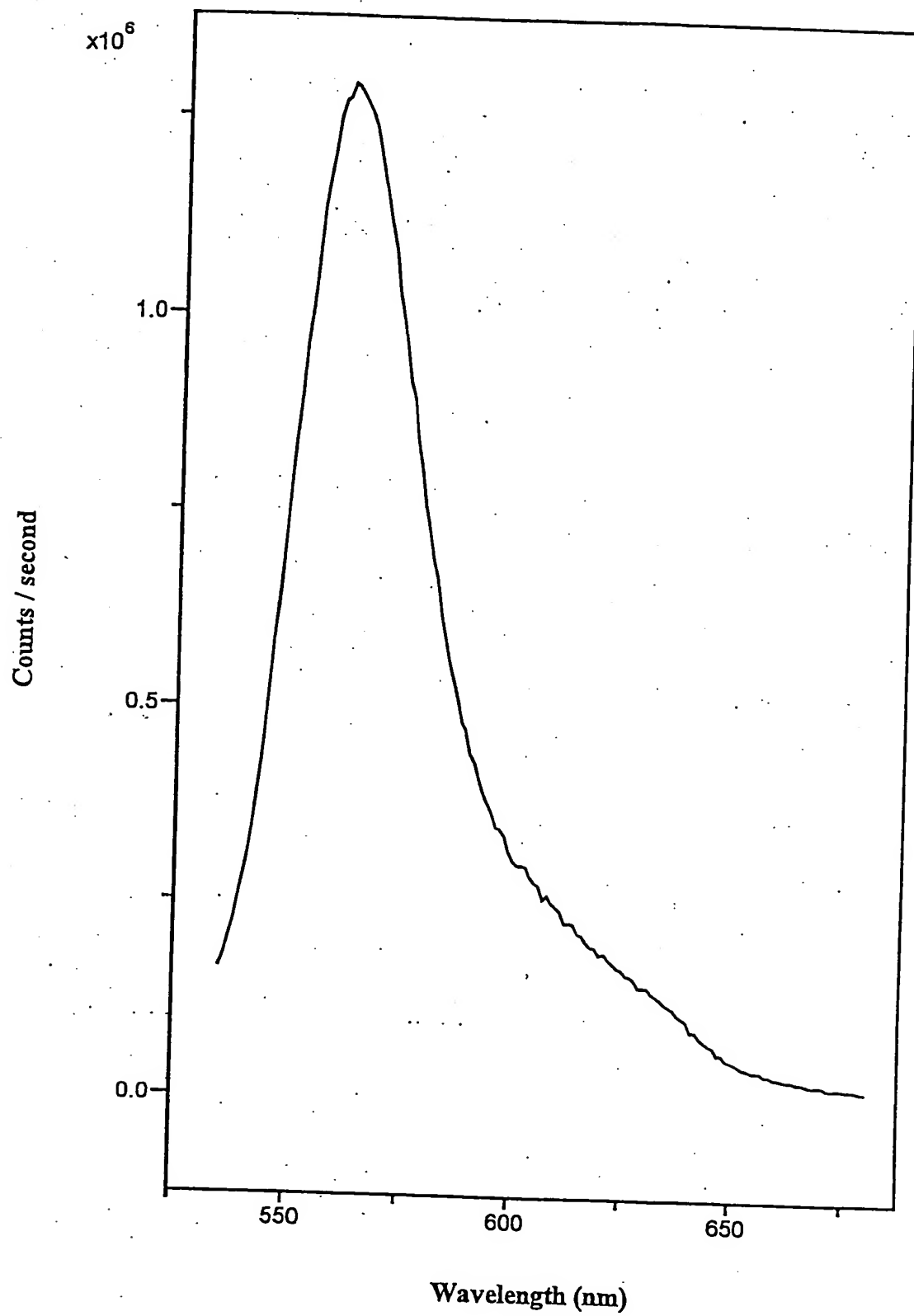


Figure 7

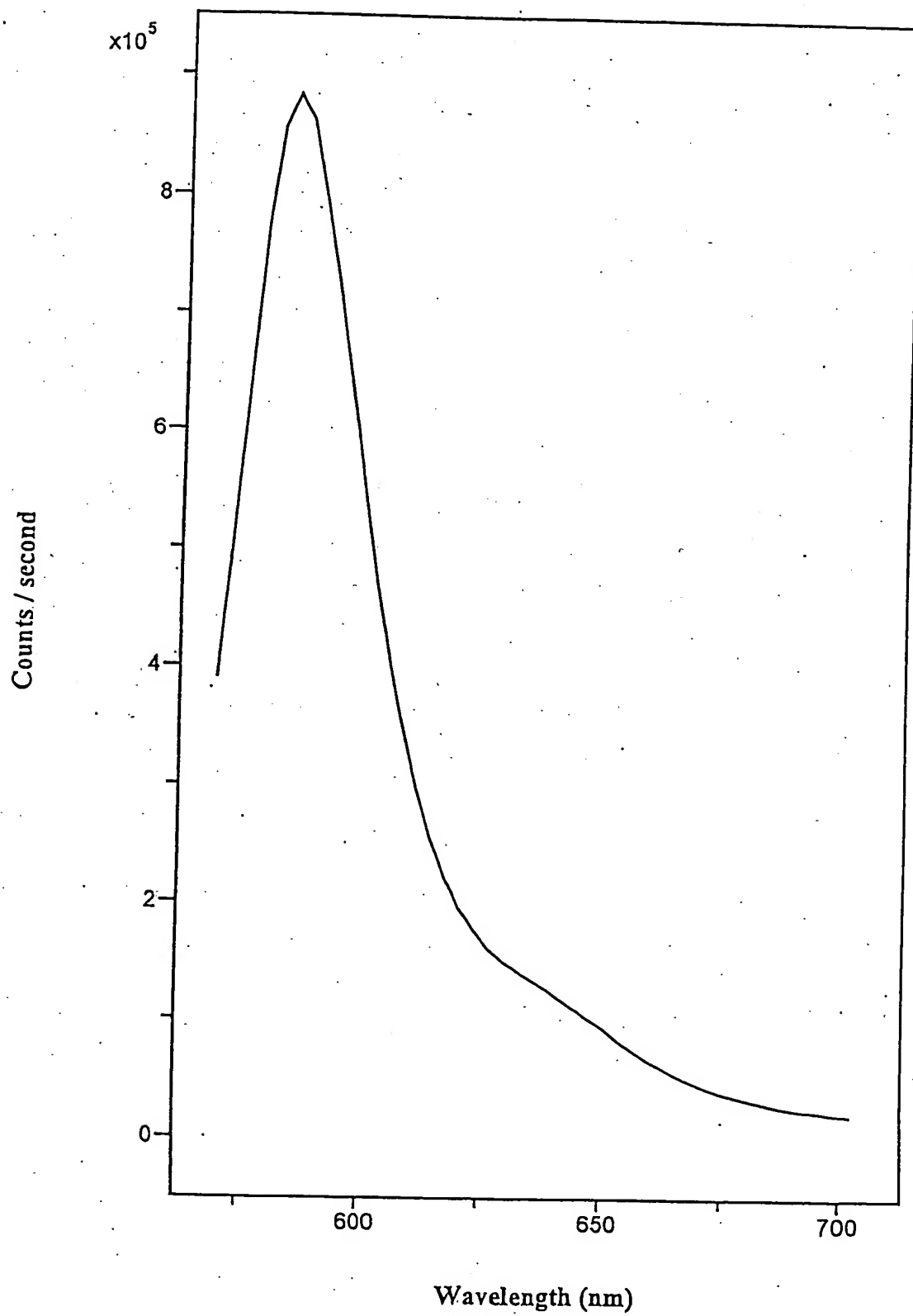


Figure 8

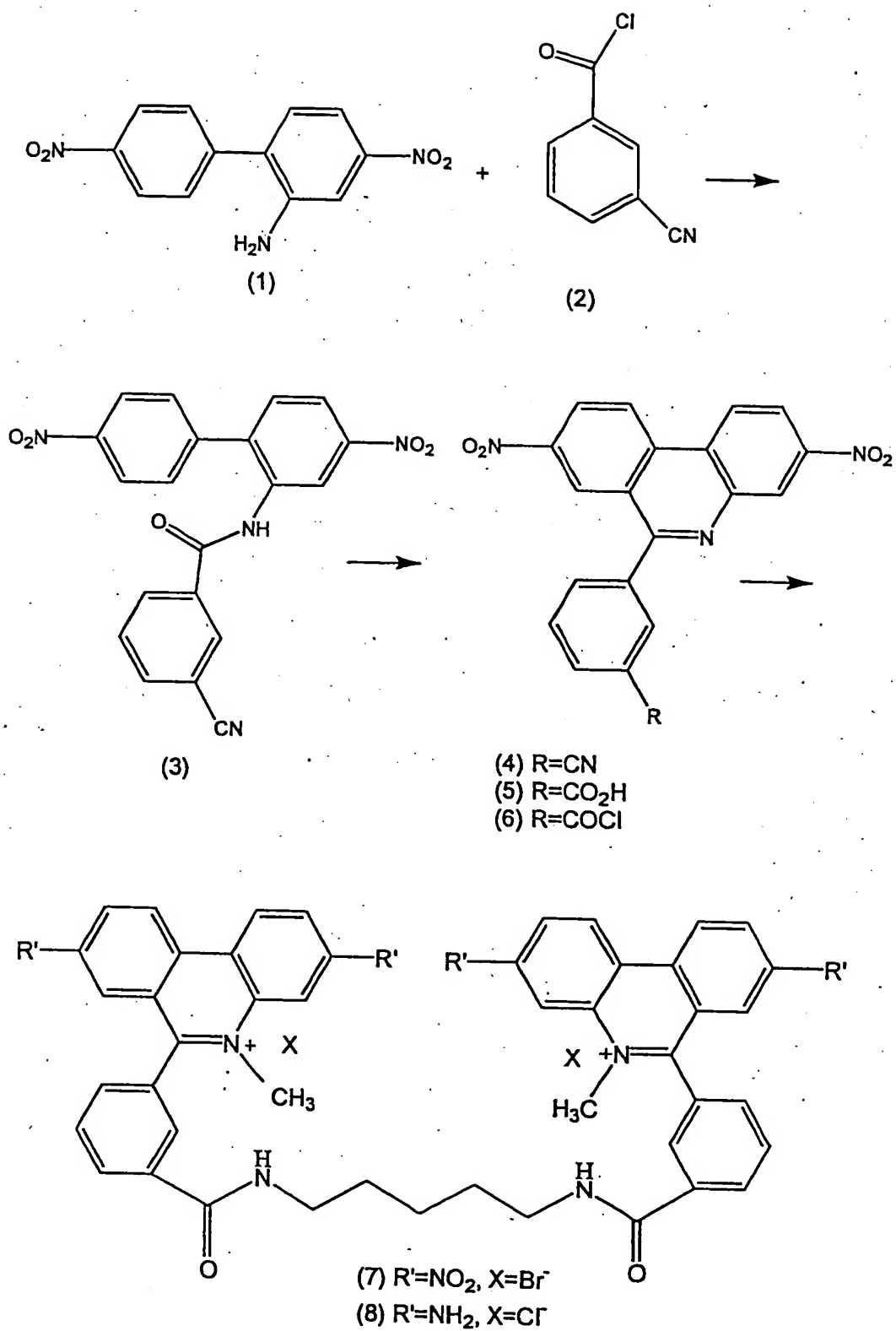
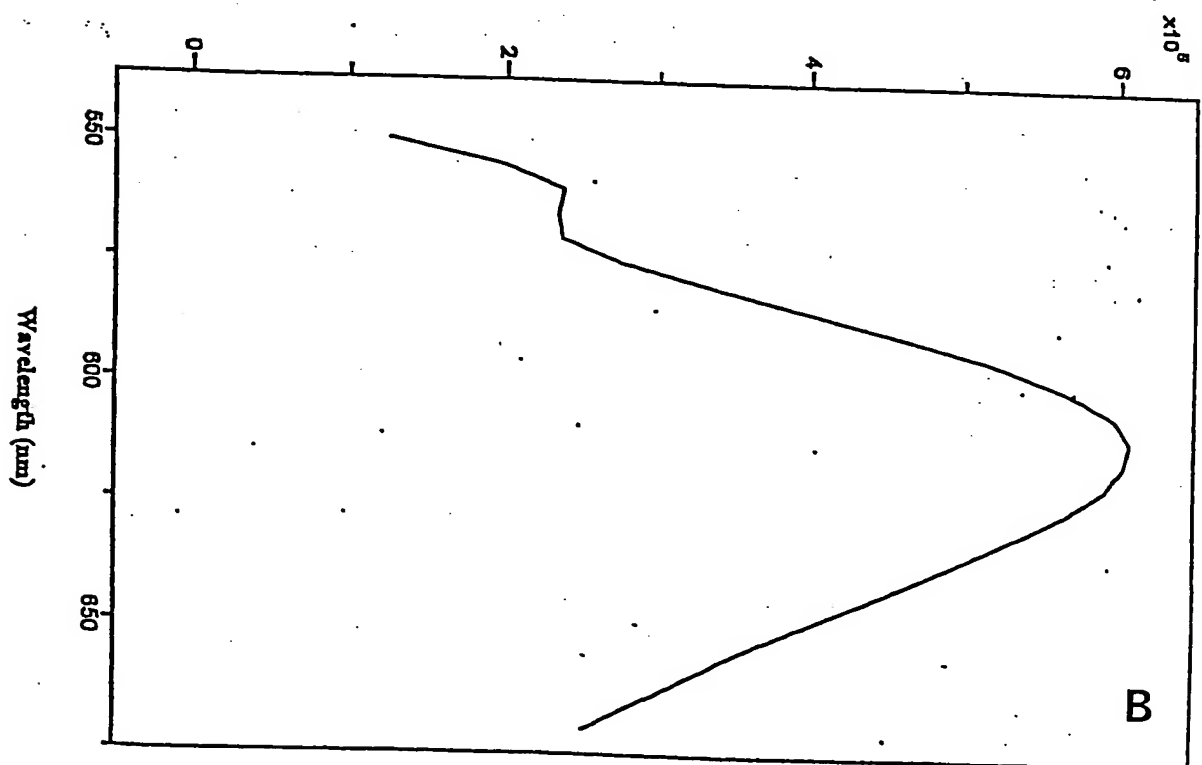
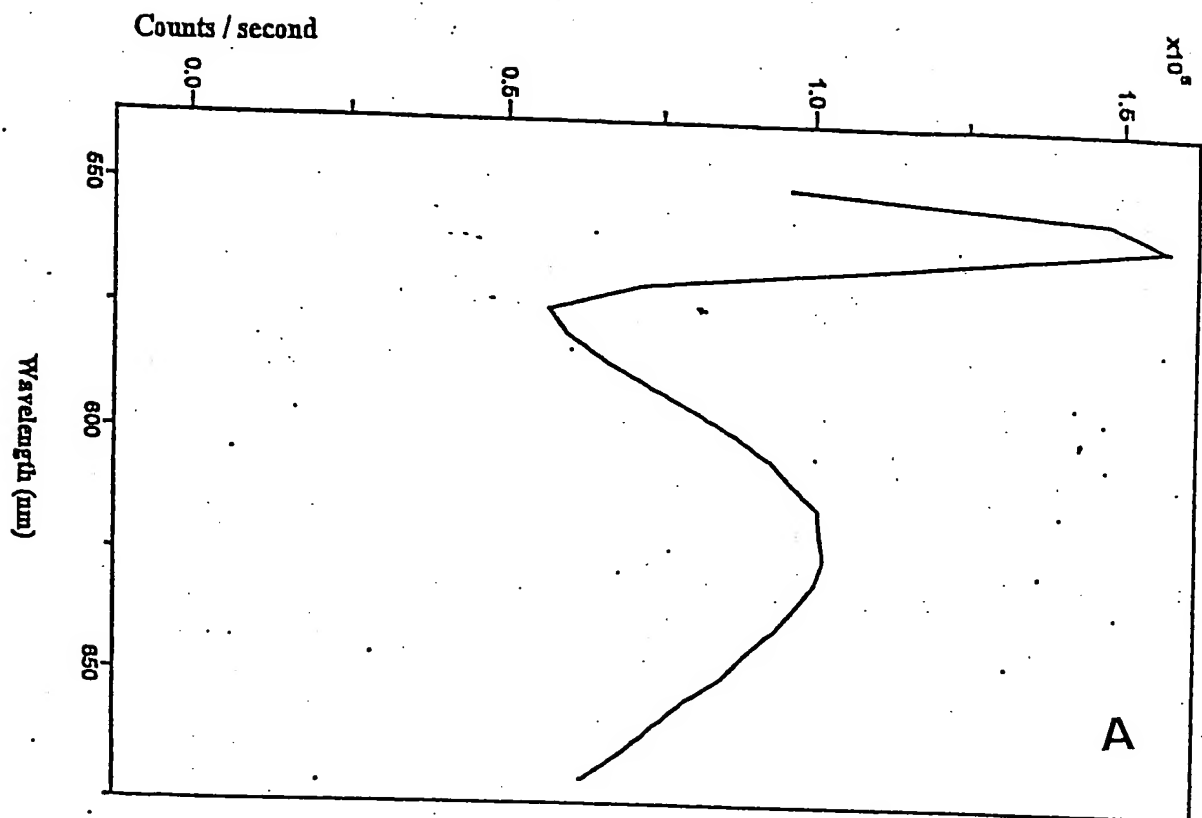
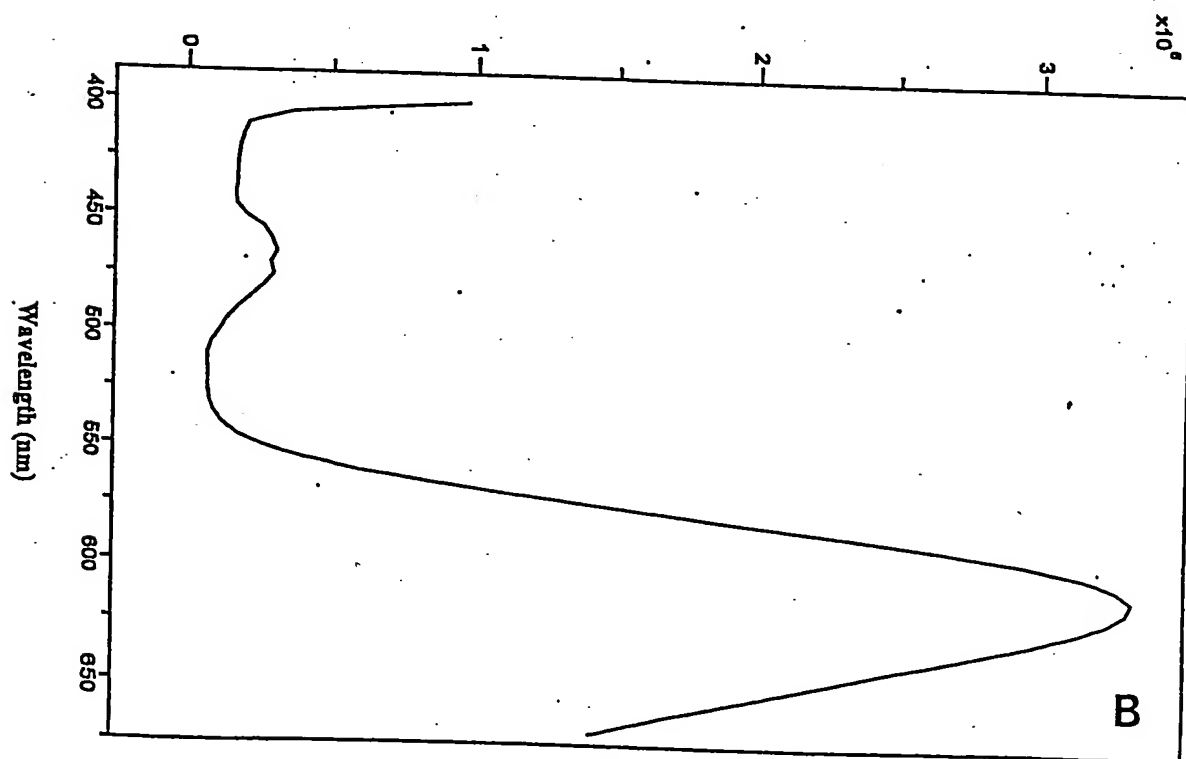
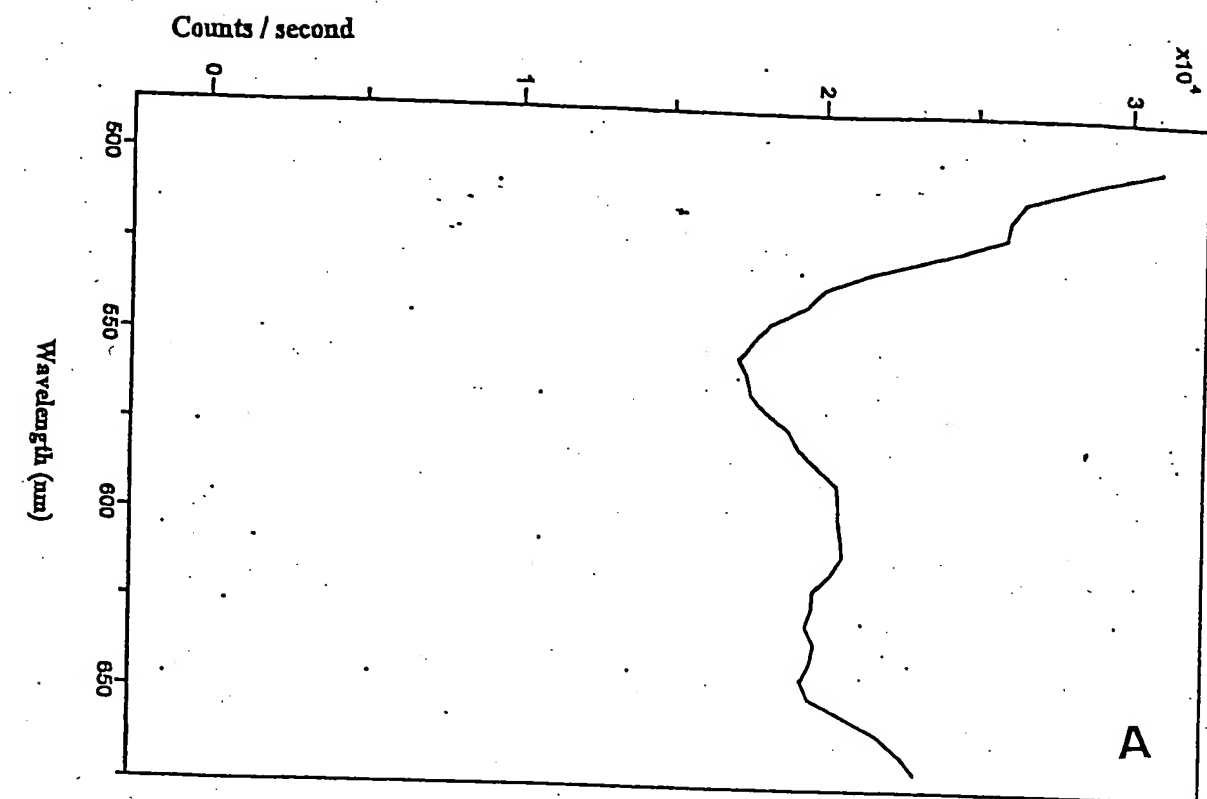


Figure 9



Illumination at 472 nM
Figure 10



Illumination at 350 nM

Figure 11

HIV Anti-sense Amplicon

Forward Primer

catgatccgg atgggagggtg →

Hybridization Probe

taatgggtg agtatccctg cctaactct →

catgatccgg atgggagggtg ggtctgaaac gataatgggtg agtatccctg cctaactcta ttcactatcc ggatgtgc
gtactaggcc taccctccac ccagactttg ctattaccac tcataggac ggattgagat aagtgatagg cctacacg

← agat aagtgatagg cctacacg

Reverse Primer


Figure 12

mRNA

poly A tail

—————AAA-3'

UUUUUUUUUUTTTTQQQQQQQ



Q = Inosine (ribonucleotide)

mRNA
 —————AAAAAAAAAAAAA-3'
 UUUUUUUUUUUUTTTTQQQQQQQQ

Reverse Transcriptase

mRNA
 ————— AAAAAAAAAAAAAAAAAA CCCCCC — 3'
 UUUUUUUUUU TTTT QQQQQQQQ

D) Removal of CNAC and binding of primer with promoter sequence

mRNA GGGGGGG-promoter-5'
 ————— AAAAAAAAAAAAAAAAAA CCCCCC-3'

Figure 13

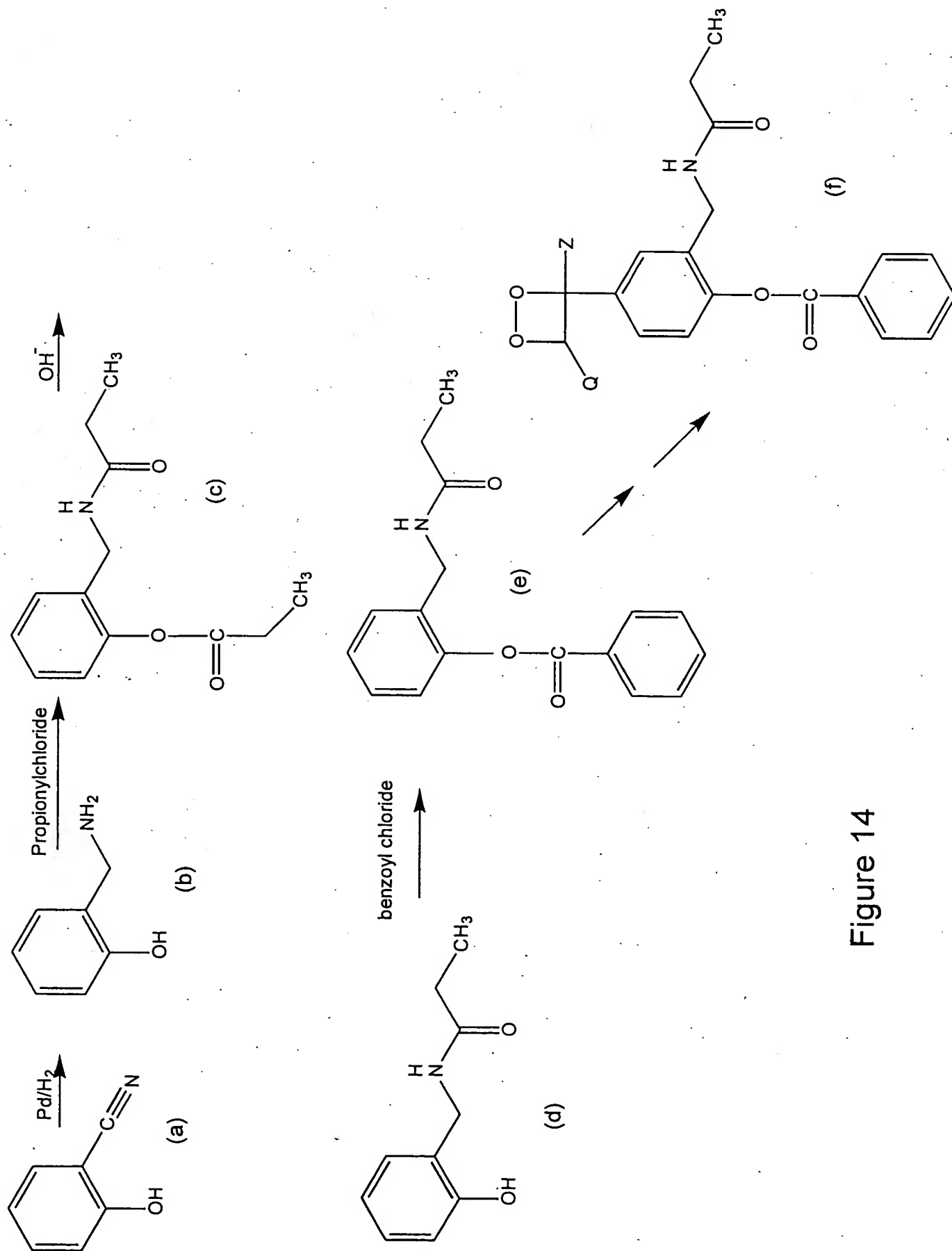


Figure 14

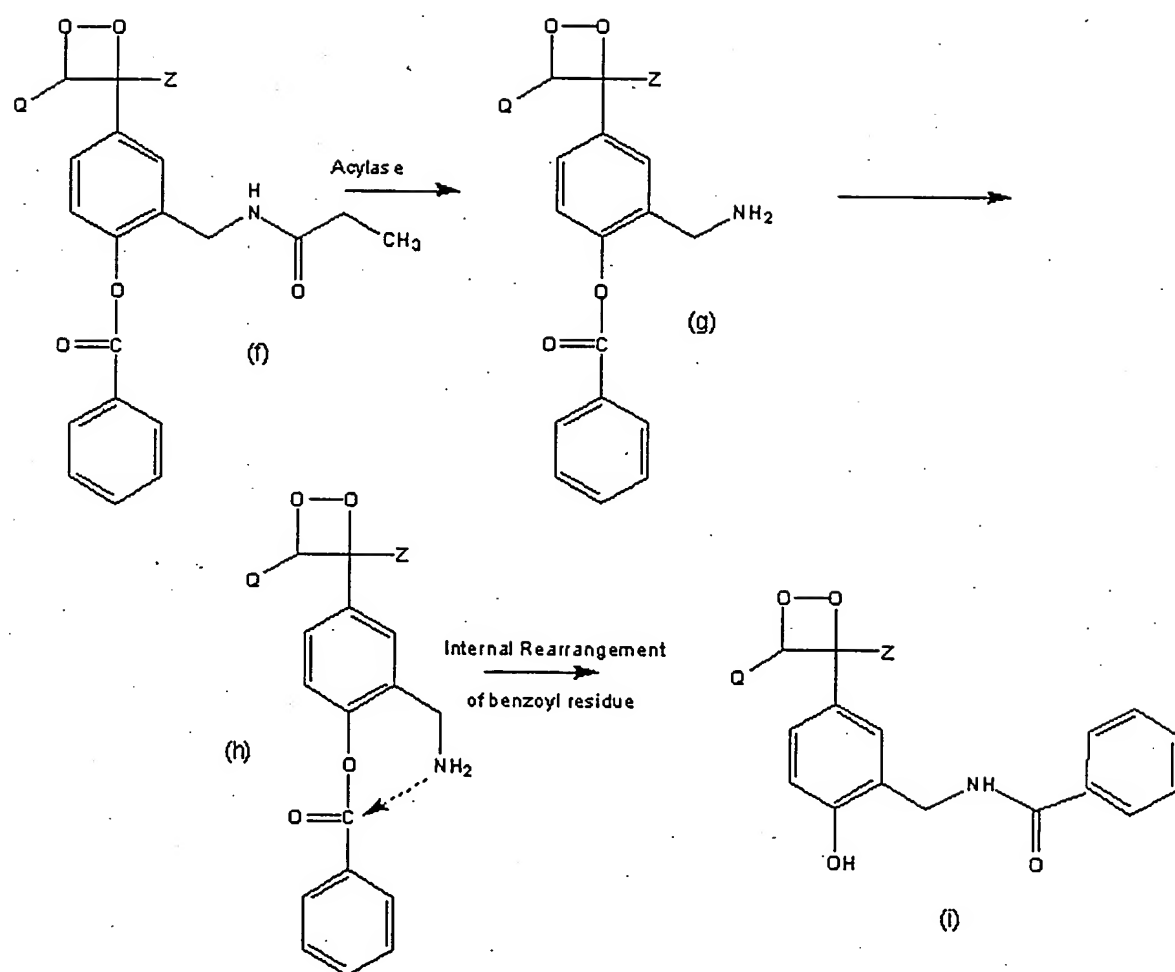


Figure 15